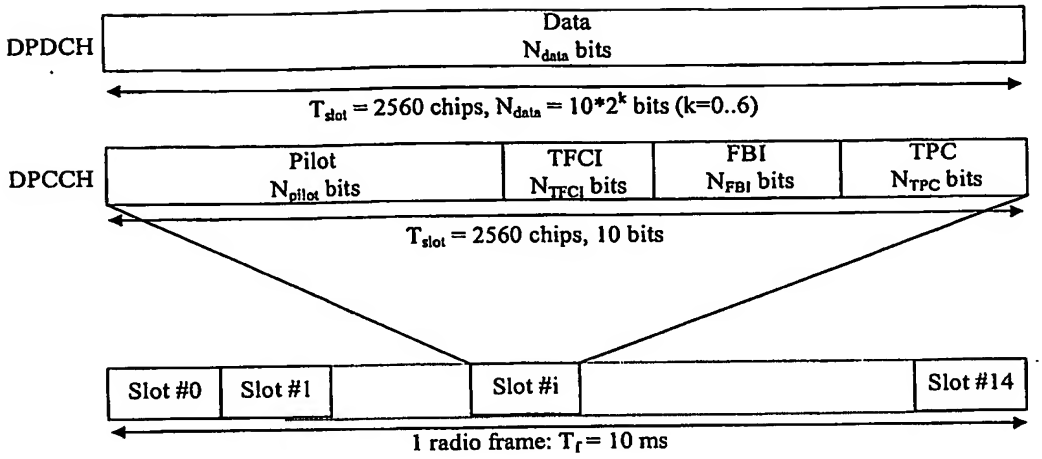


Figure 1: Frame structure for uplink DPDCH/DPCCH

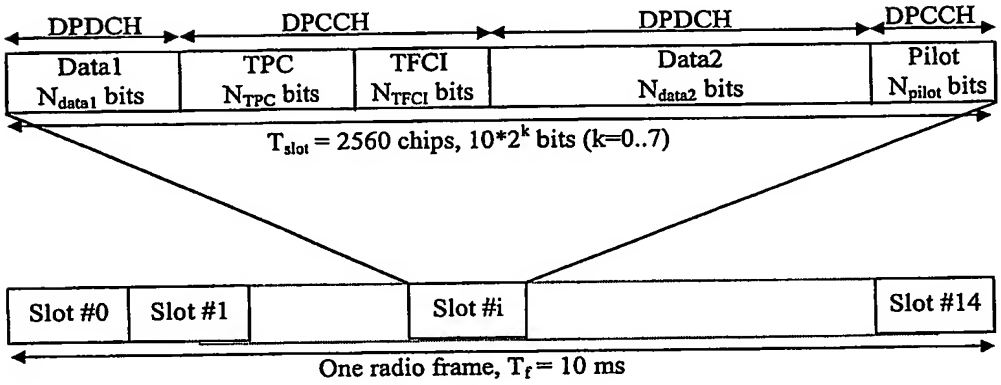
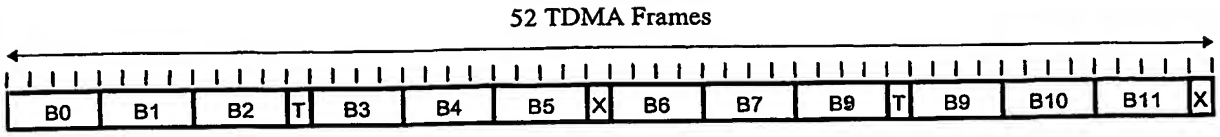


Figure 2: Frame structure for downlink DPCH



X = Idle frame
T = Frame used for PTCCH
B0 - B11 = Radio blocks

Figure 3: Multiframe structure for PDCH

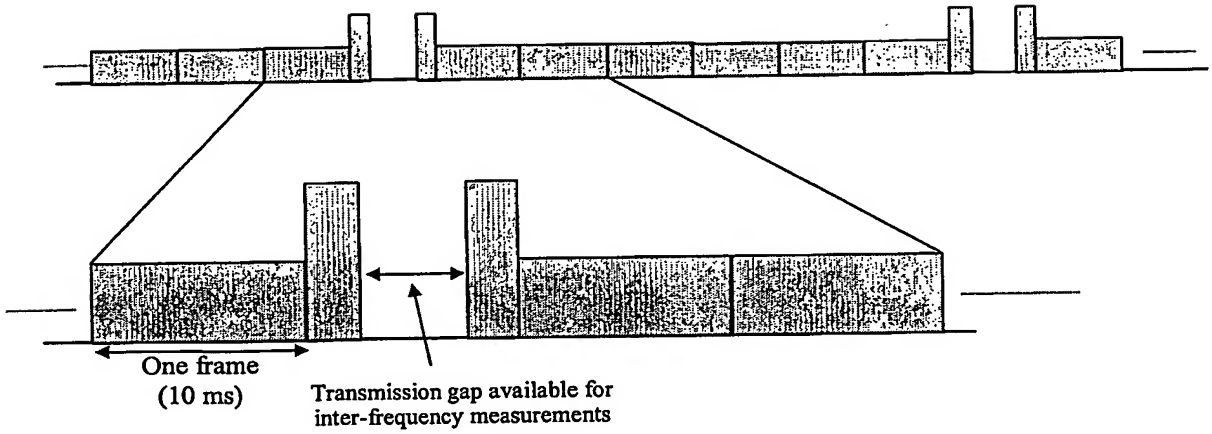


Figure 4: Compressed mode transmission

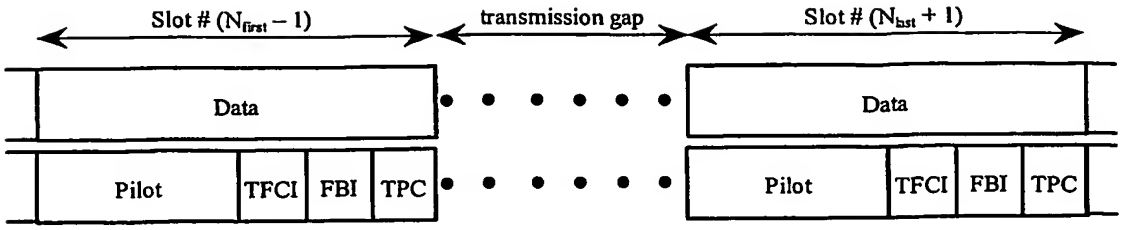


Figure 5: Frame structure in uplink compressed transmission

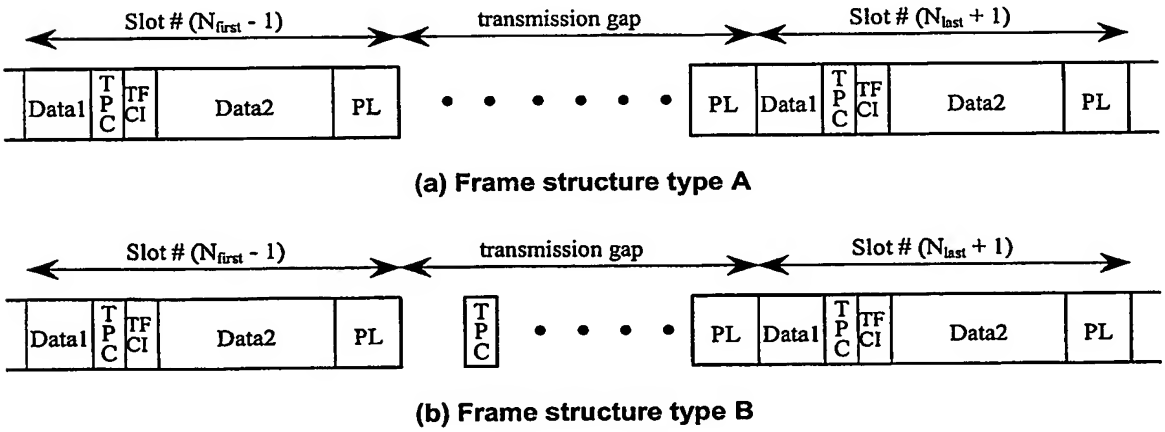


Figure 6: Frame structure types in downlink compressed transmission

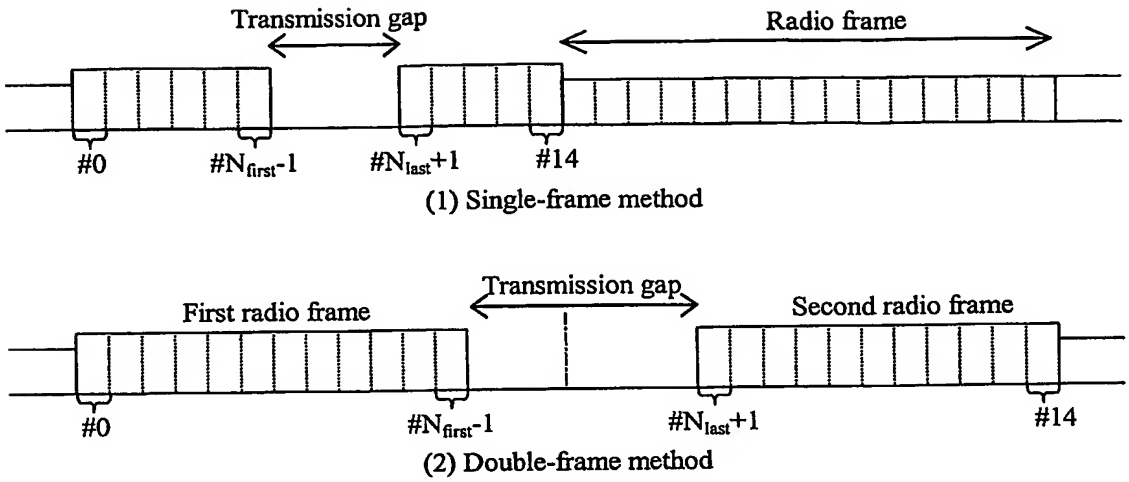


Figure 7: Transmission gap positioning

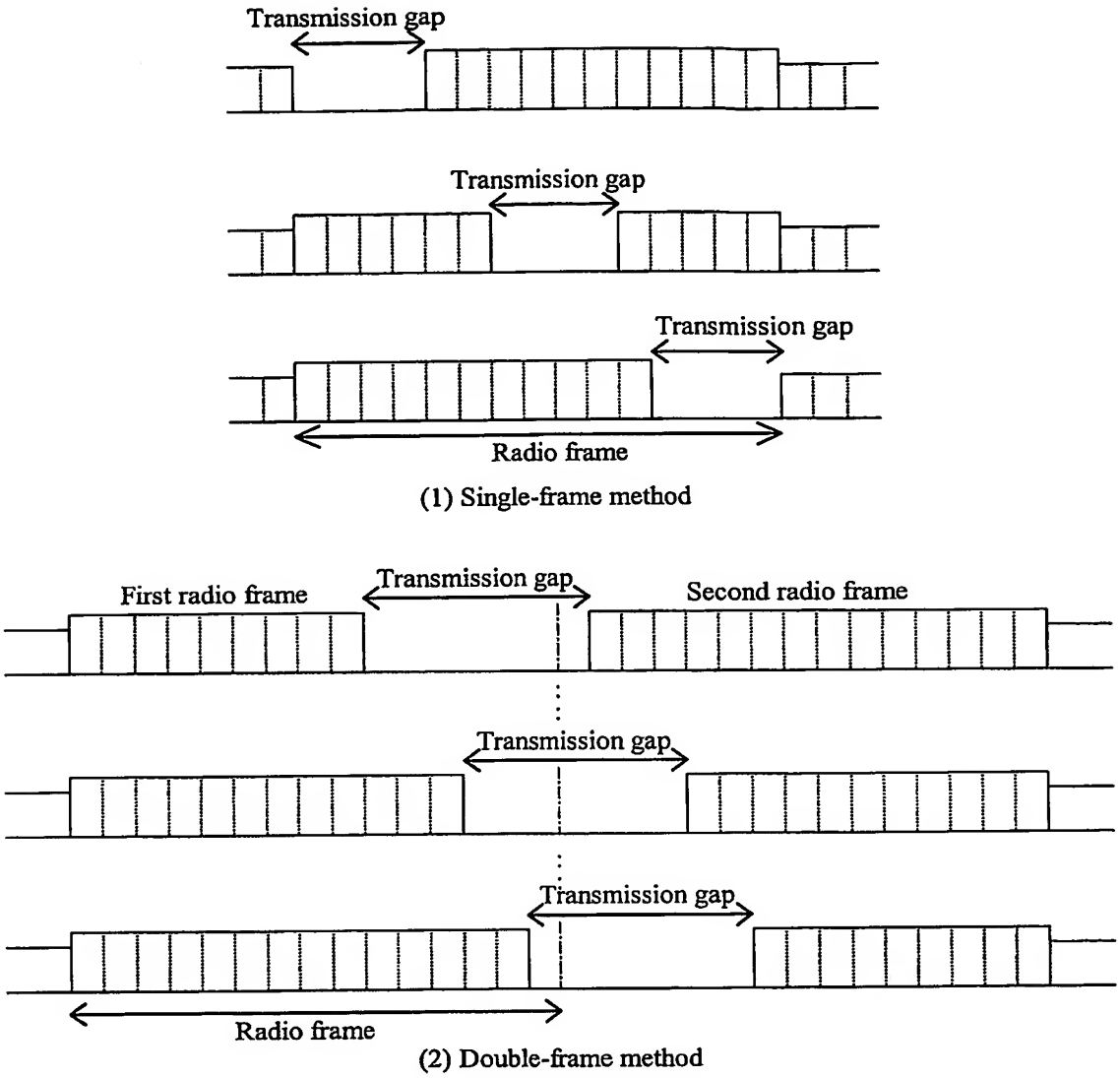


Figure 8: Transmission gap positions

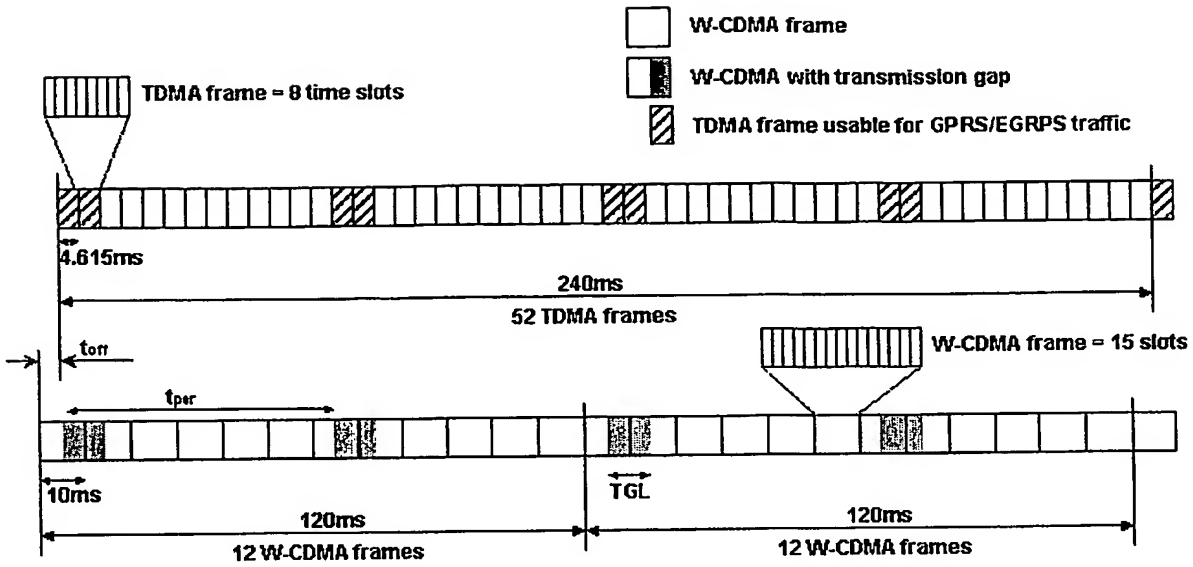


Figure 9: Mapping of TDMA and W-CDMA frames

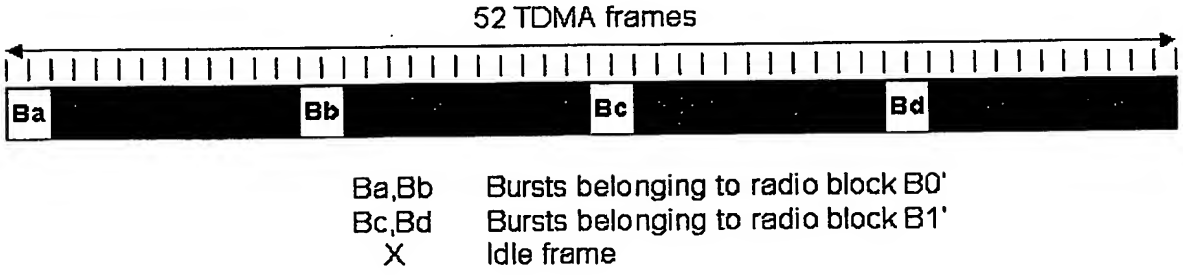


Figure 10: Modified TDMA frame structure

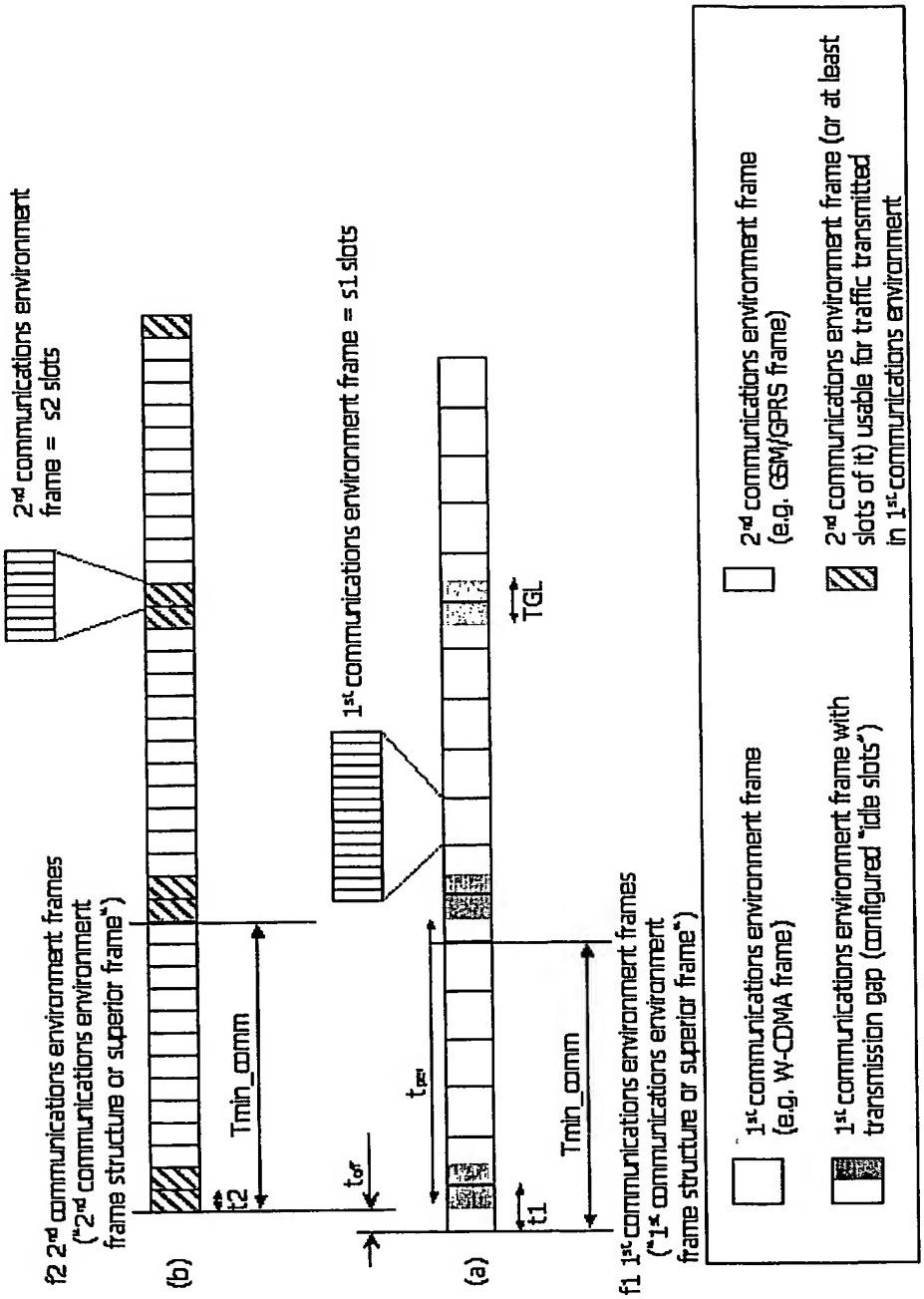
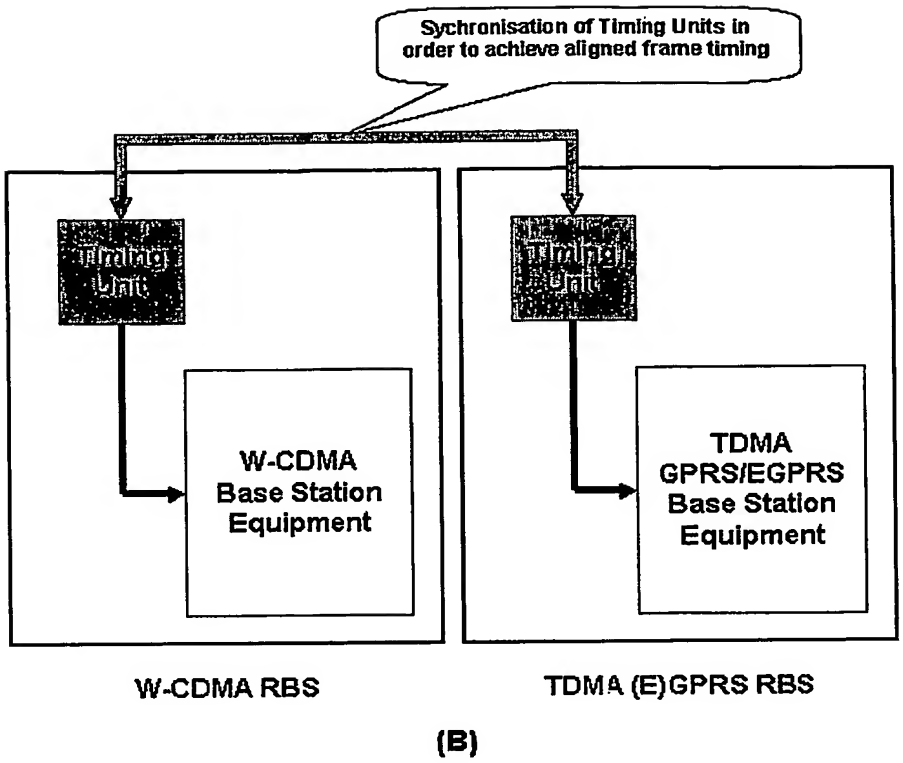


Figure 11: Mapping of a first frame structure to a second frame structure



(B)

Figure 12: TDMA and W-CDMA single-mode radio base stations

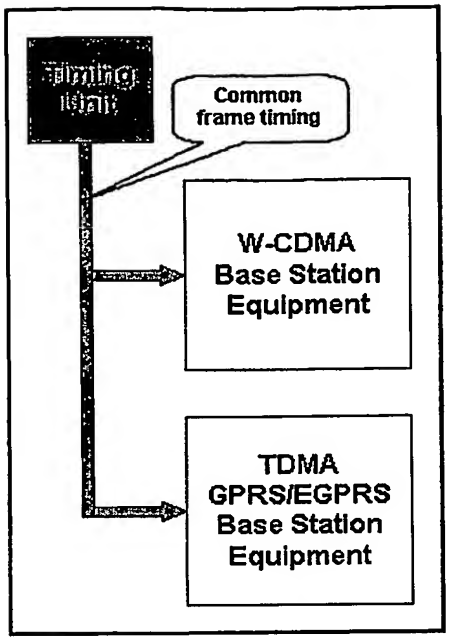


Figure 13: Dual-mode radio base station

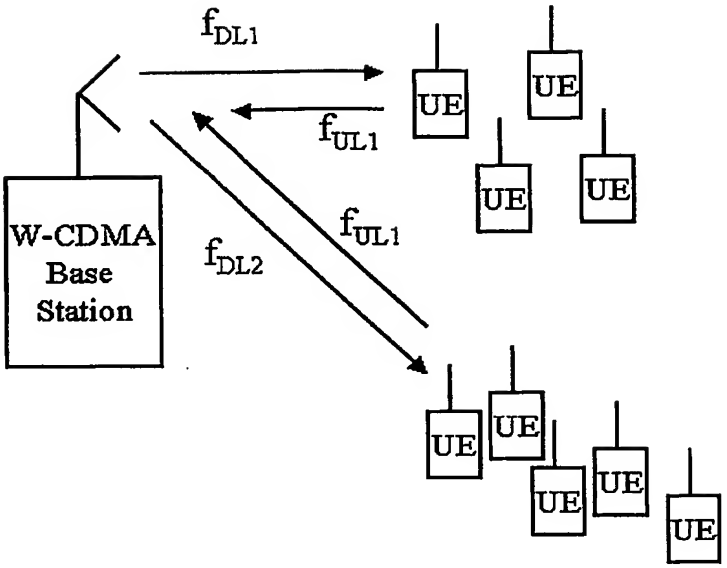


Figure 14: Variable duplex distance for a FDD TDD spectrum sharing

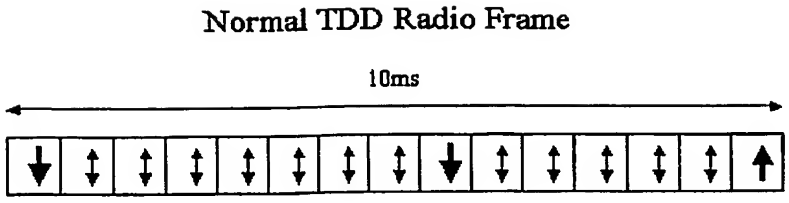


Figure 15: Conventional TDD frame structure

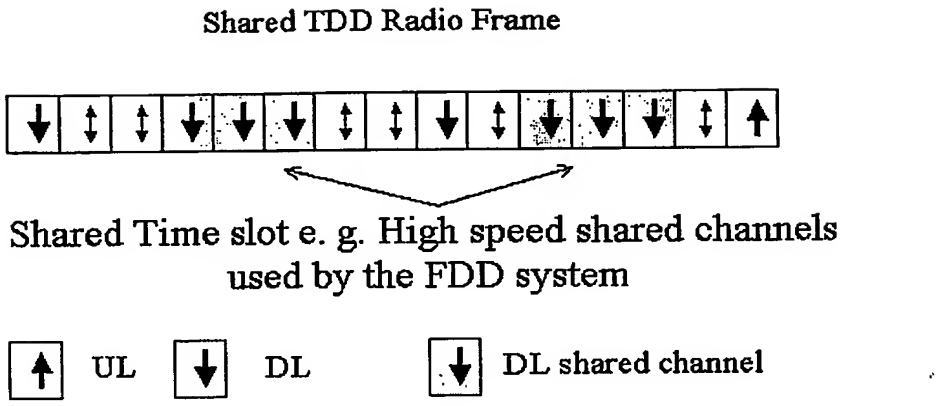


Figure 16: TDD frame structure for TDD/FDD spectrum sharing

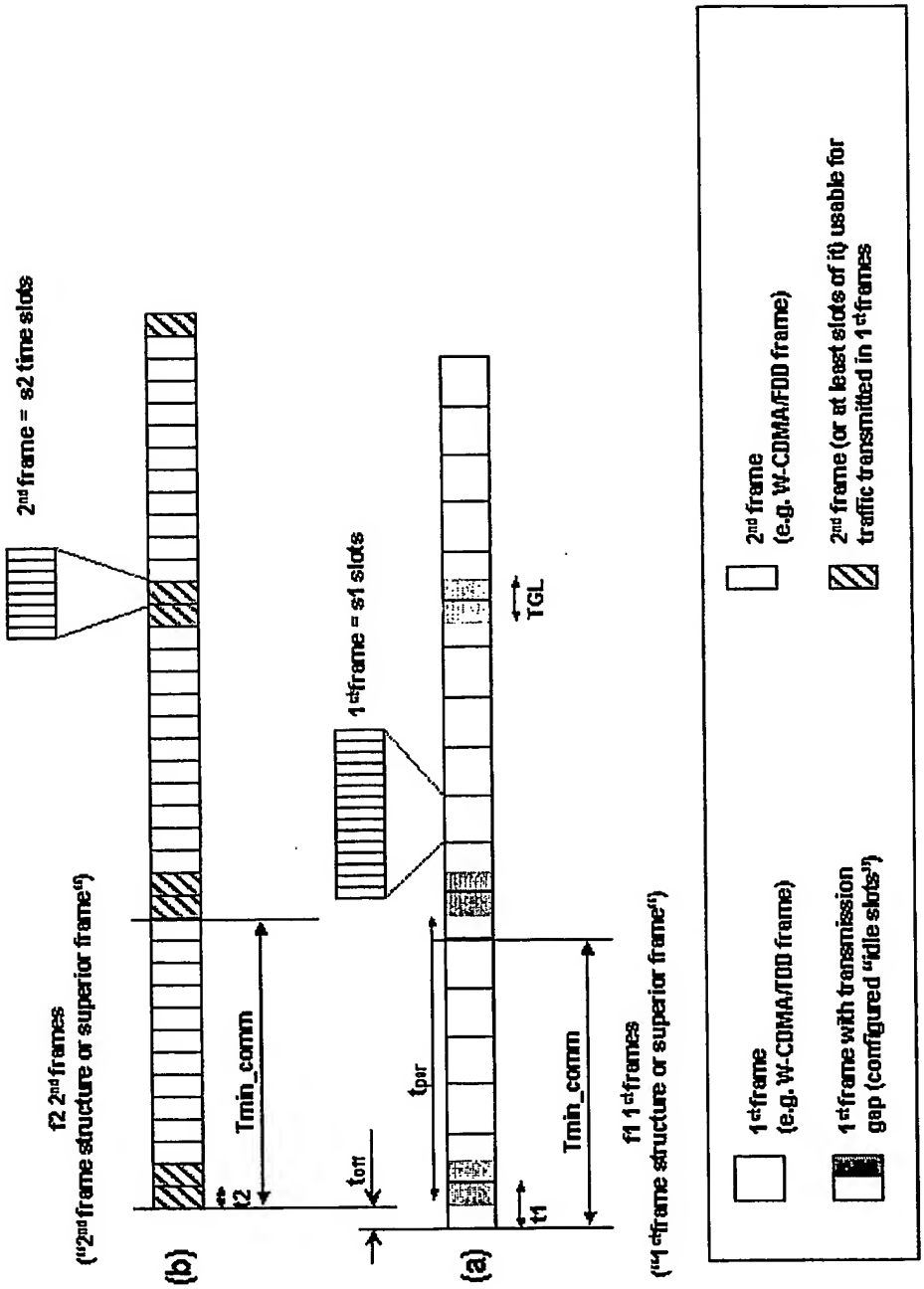


Figure 17: Mapping of a first frame structure to a second frame structure

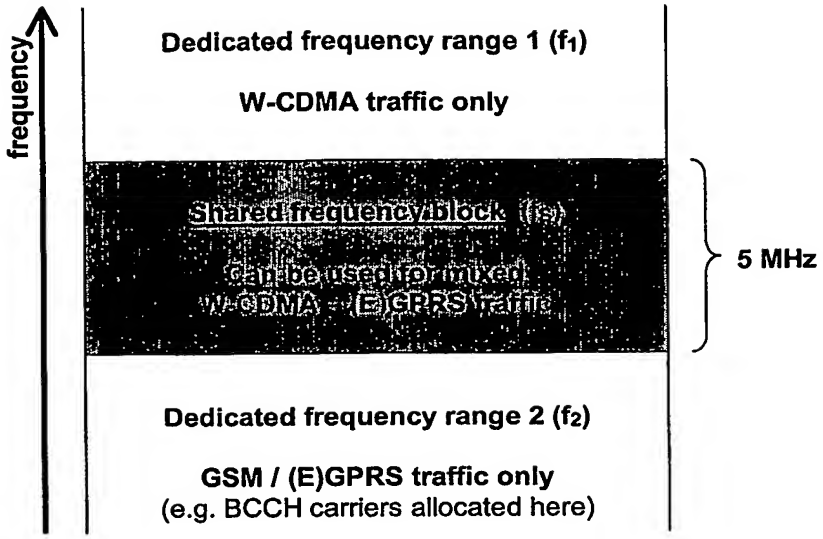
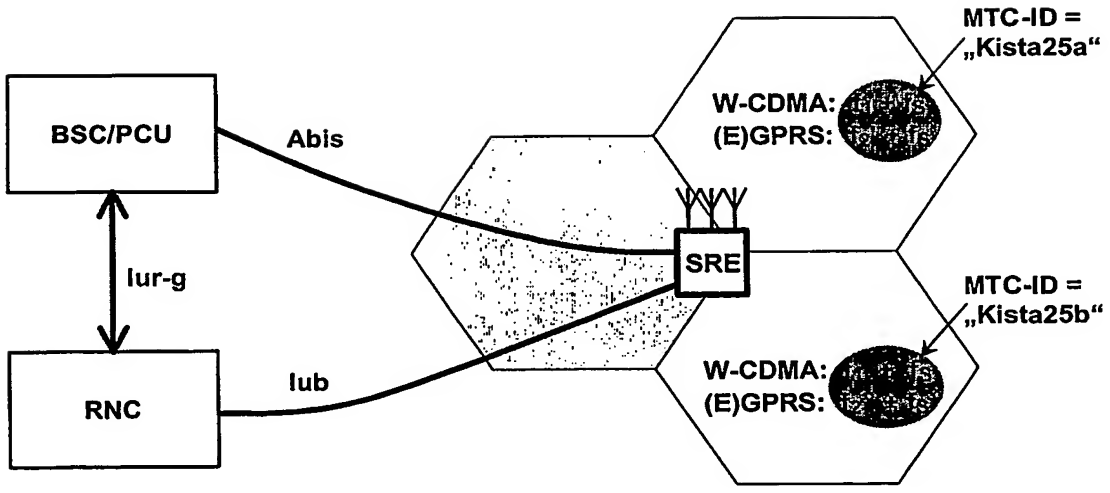


Figure 18



SRE = Synchronised RBS Equipment

where f_x' and f_x'' are suitable carrier frequencies out of frequency range f_x

Figure 19

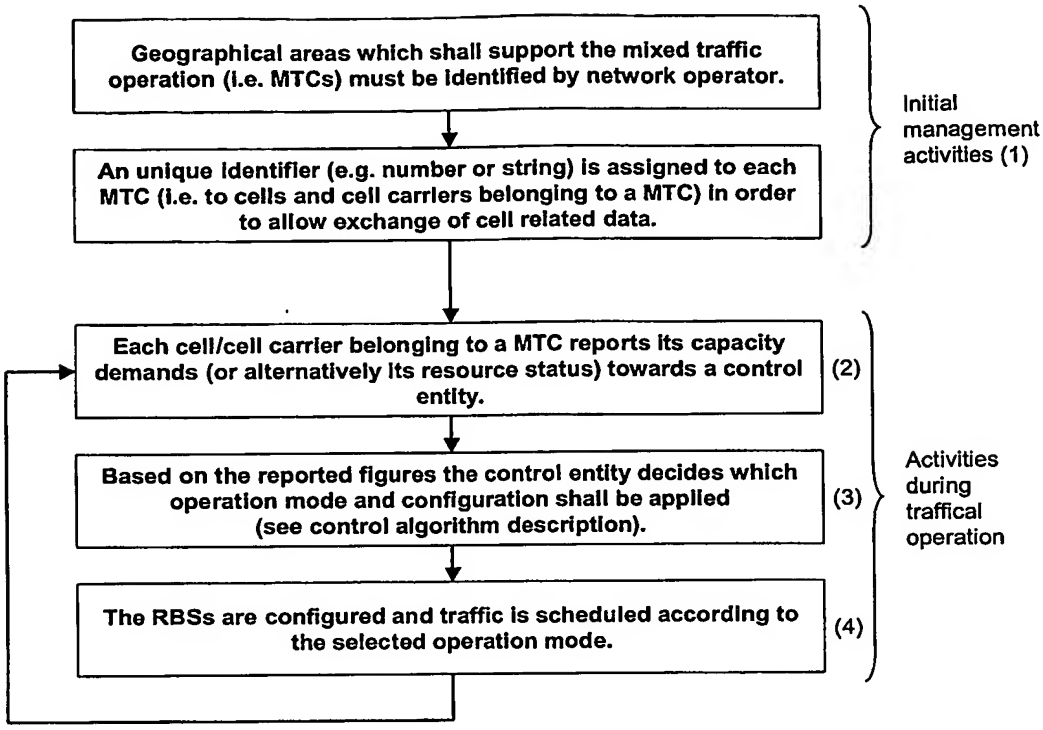

Geographical areas which shall support the mixed traffic operation (i.e. MTCs) must be identified by network operator.
An unique identifier (e.g. number or string) is assigned to each MTC (i.e. to cells and cell carriers belonging to a MTC) in order to allow exchange of cell related data.
Initial management activities (1)
Each cell/cell carrier belonging to a MTC reports its capacity demands (or alternatively its resource status) towards a control entity.
(2)
Based on the reported figures the control entity decides which operation mode and configuration shall be applied (see control algorithm description).
(3)
The RBSs are configured and traffic is scheduled according to the selected operation mode.
(4)
Activities during traffical operation

Figure 20

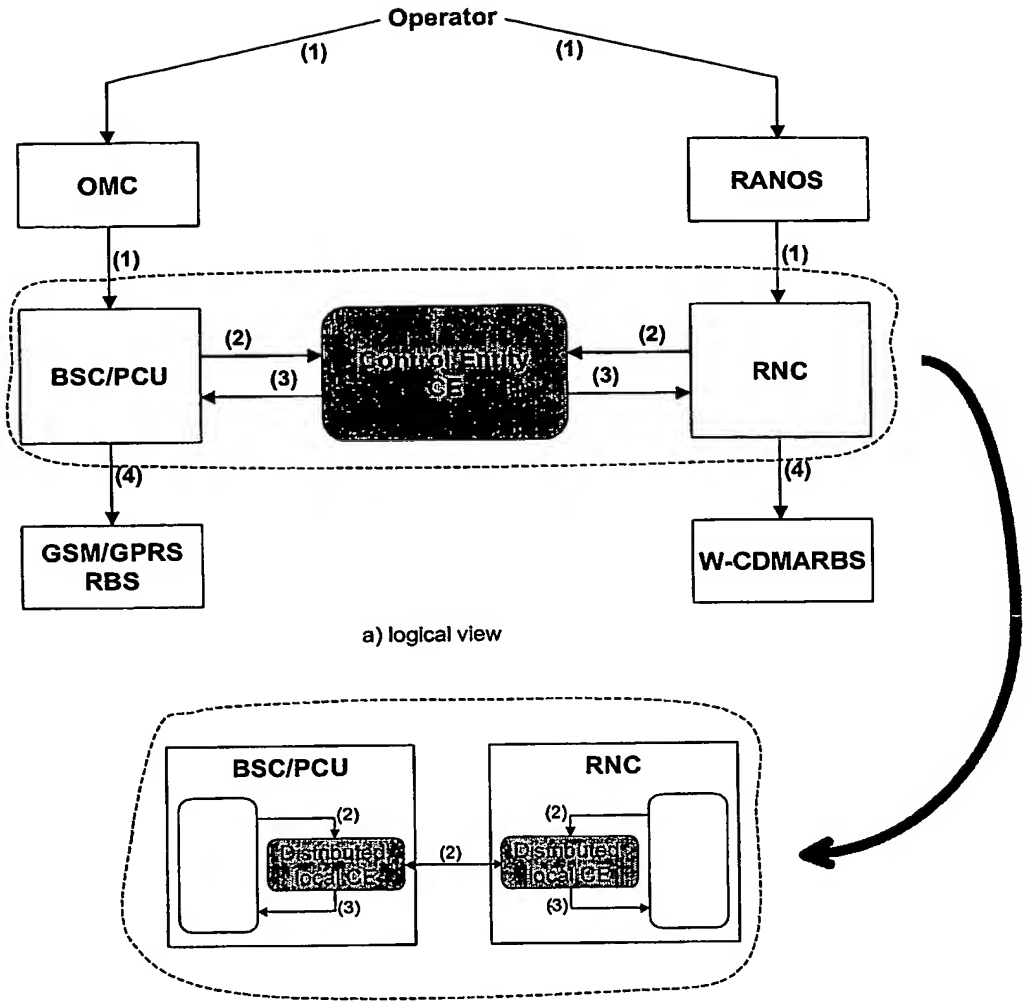

Operator
(1)
(1)
OMC
RANOS
(1)
(1)
BSC/PCU
(2)
(3)
Control Entity
CE
(2)
(3)
RNC
(4)
(4)
GSM/GPRS
RBS
W-CDMARBS
a) logical view
BSC/PCU
RNC
(2)
Distributed
local CE
(3)
(2)
(2)
Distributed
local CE
(3)
b) implementation view

Figure 21

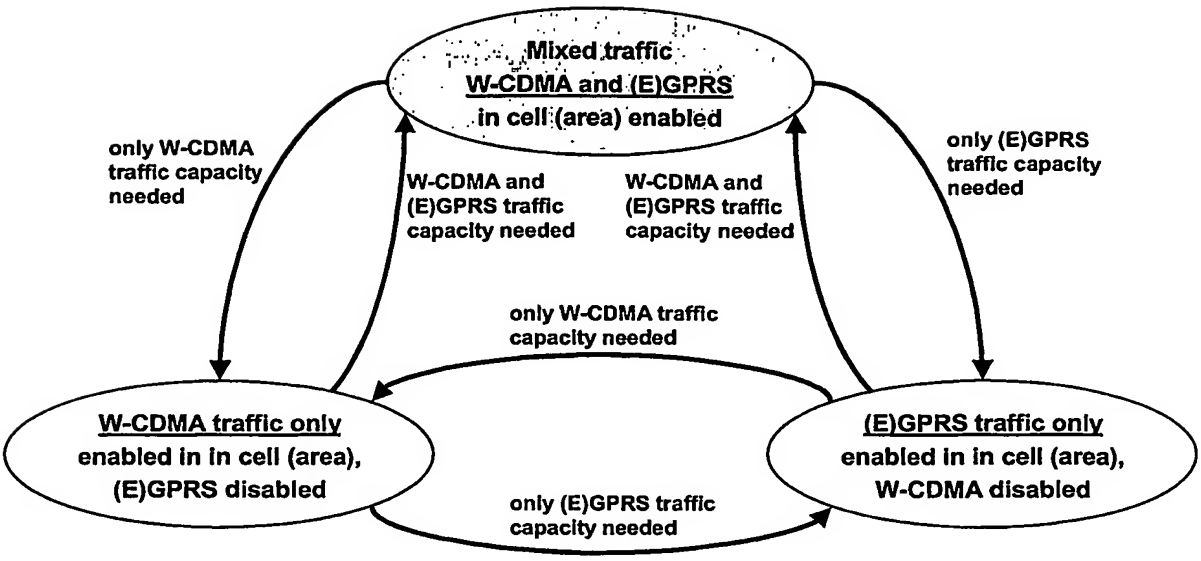


Figure 22

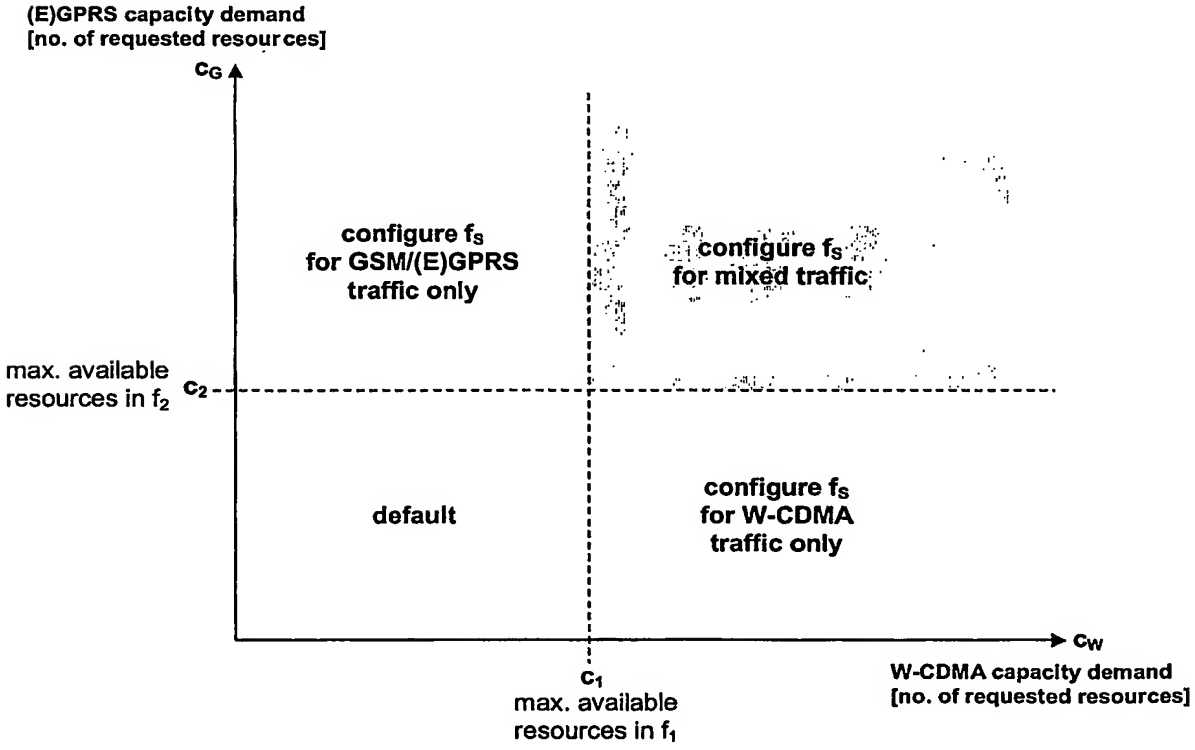
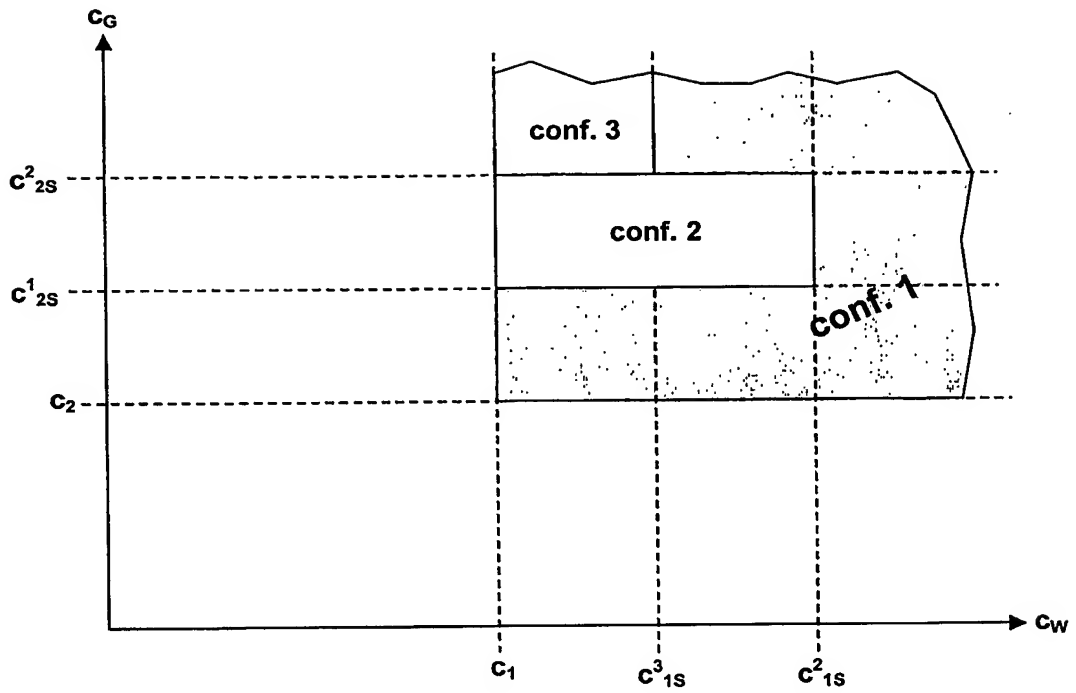


Figure 23



c^n_{1S} : total available W-CDMA traffic capacity in f_1 and f_S, when conf. n used for f_S
c^n_{2S} : total available (E)GPRS traffic capacity in f_2 and f_S, when conf. n used for f_S

Figure 24

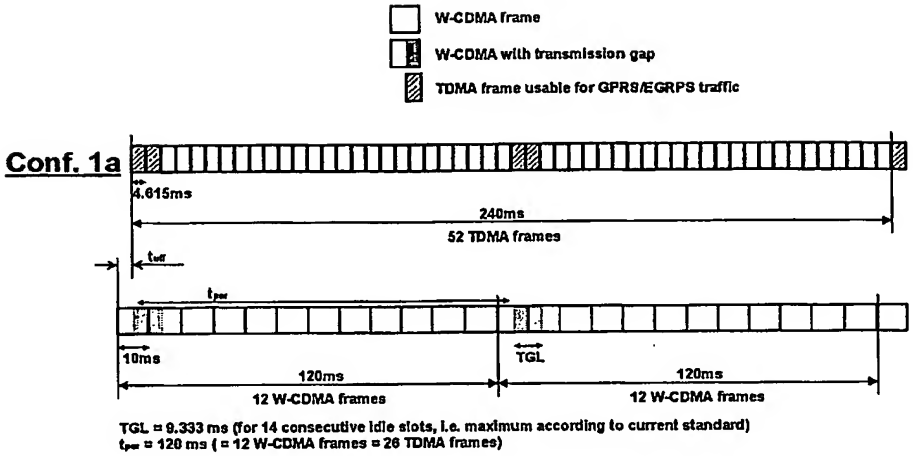

W-CDMA frame
W-CDMA with transmission gap
TDMA frame usable for GPRS/EGRPS traffic
Conf. 1a
4.615ms
240ms
52 TDMA frames
t_{off}
t_{per}
10ms
120ms
12 W-CDMA frames
TGL
120ms
12 W-CDMA frames
TGL = 9.333 ms (for 14 consecutive idle slots, i.e. maximum according to current standard)
t_{per} = 120 ms (= 12 W-CDMA frames = 26 TDMA frames)

Figure 25

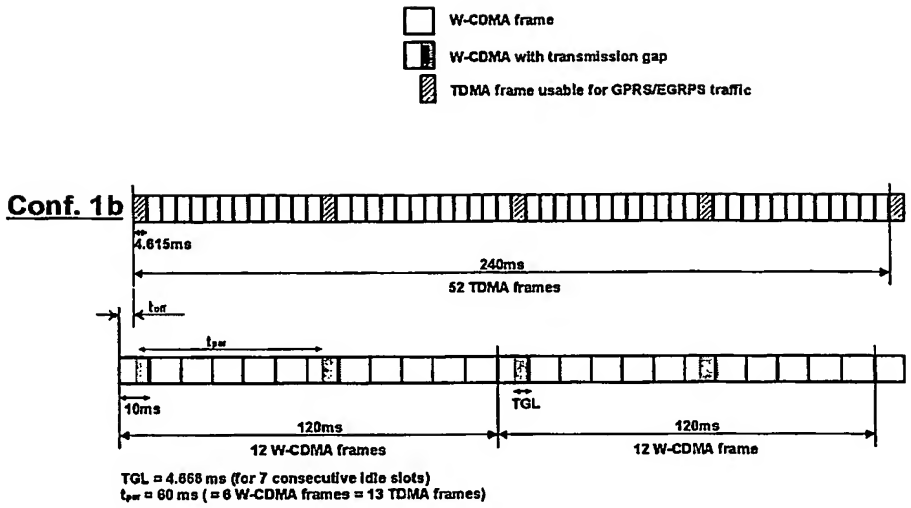

W-CDMA frame
W-CDMA with transmission gap
TDMA frame usable for GPRS/EGRPS traffic
Conf. 1b
4.615ms
240ms
52 TDMA frames
t_{off}
t_{per}
10ms
TGL
120ms
120ms
12 W-CDMA frames
12 W-CDMA frame
TGL = 4.666 ms (for 7 consecutive idle slots)
t_{per} = 60 ms (= 6 W-CDMA frames = 13 TDMA frames)

Figure 26

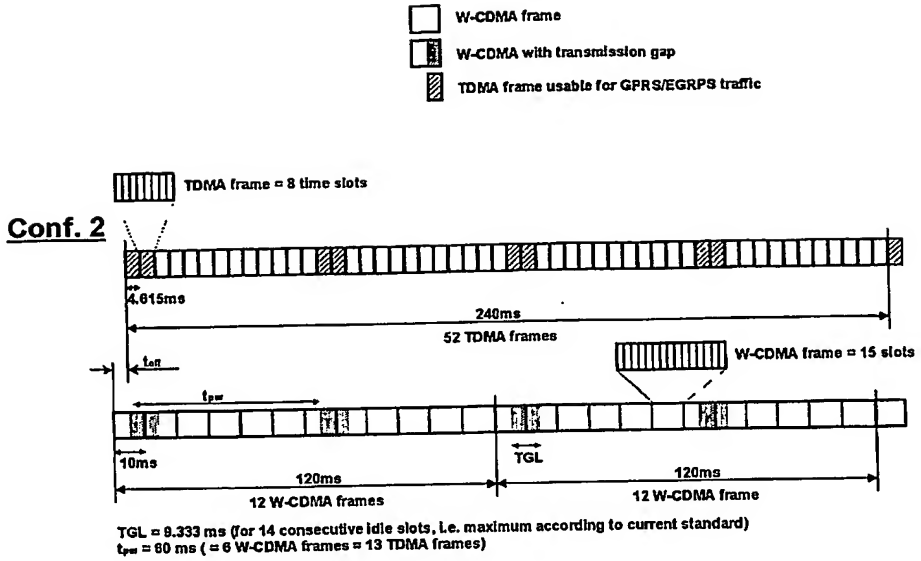

W-CDMA frame
W-CDMA with transmission gap
TDMA frame usable for GPRS/EGRPS traffic
TDMA frame = 8 time slots
Conf. 2
4.615ms
240ms
52 TDMA frames
W-CDMA frame = 15 slots
10ms
120ms
12 W-CDMA frames
TGL
120ms
12 W-CDMA frame
TGL = 9.333 ms (for 14 consecutive idle slots, i.e. maximum according to current standard)
= 80 ms (= 6 W-CDMA frames = 13 TDMA frames)

Figure 27

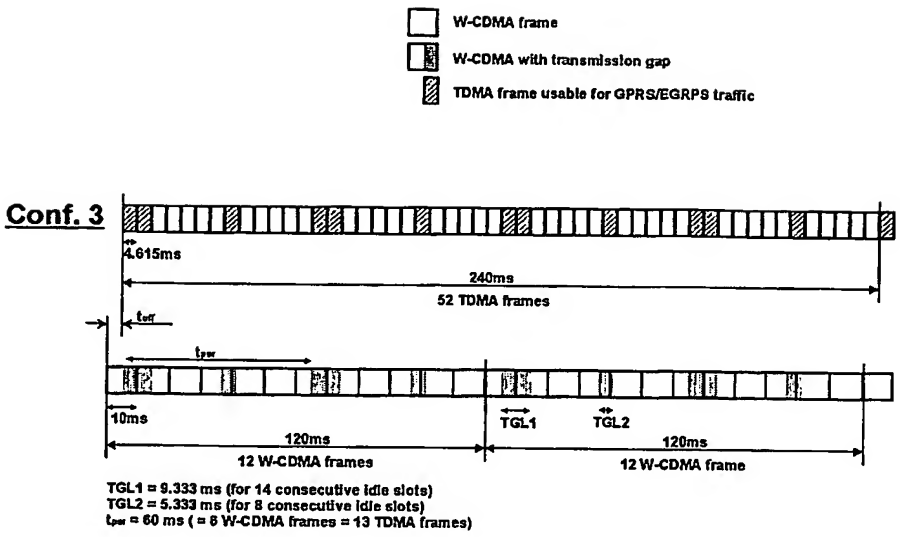

W-CDMA frame
W-CDMA with transmission gap
TDMA frame usable for GPRS/EGRPS traffic
Conf. 3
4.615ms
240ms
52 TDMA frames
t_{off}
t_{pw}
10ms
120ms
12 W-CDMA frames
TGL1
TGL2
120ms
12 W-CDMA frame
TGL1 = 9.333 ms (for 14 consecutive idle slots)
TGL2 = 5.333 ms (for 8 consecutive idle slots)
t_{pw} = 60 ms (= 8 W-CDMA frames = 13 TDMA frames)

Figure 28